

I am opposed to the proposal to allow Broadband Over Power Lines as a transmission system for internet connections. There are 3 broad reasons for my opposition: 1) it is an inadequate solution; 2) it is impractical to maintain and hold to existing FCC spectral purity standards, and 3) it will generate broadband radio frequency interference that will interfere with low power communications that are critical in emergency situations.

1. Existing wired connections via telephone (DSL and modem) and cable are satisfactory for most consumer needs, and optical approaches are a far more tenable solution for low-impact, radio-spectrum friendly service than the solution offered by this proposal. Optical approaches in particular should be fostered as they will allow even greater bandwidth for future needs without generating uncontrolled radio frequency interference. This proposal inappropriately uses yesterday's technology to try to solve tomorrow's problems.

2. The concept of using a broad-band signal over power lines is interesting, but ultimately will be problematic, a nightmare to maintain, and difficult if impossible for a personnel-limited FCC to regulate. Consider that the power companies already have difficulty reducing unintended radio-frequency emissions from the power line system that arise from arcing and weather-dependent resistive pathways in undermaintained systems. Add to this the likelihood that there will be non-linear junctions that can produce harmonic products from the fundamental signals, and there will be a tremendous amount of wideband RF noise generated; it will likely be uneconomical for the operating companies to maintain such an extensive system to the same technical standards (harmonic and inharmonic spurious radiation, field strengths) imposed on other users of the radio services, and respond to field complaints about radiation and interference. Studies in Europe have already shown that the level of broadband noise that is generated by this kind of uncontrolled system will cause catastrophic interference to other services. How would you like your sky constantly blackened by a coal burning stack in your front yard?

3. A final issue relates to the ability to use radio spectrum for emergency communications. Given the events of the past few years (re. terrorism), having capacity in this country for effective emergency communications seems to be a very important issue both to the government and to the people. Such communications often take place using low power, which places considerable requirements on receiving equipment. I can personally vouch that even a modest amount of radiation from power systems can completely wipe out such communication. As an amateur radio operator who uses low power to communicate, and as one who would do so in an emergency situation, I therefore oppose any technology that generates additional pollution of the radio spectrum.

Sincerely,

Paul B. Manis, Ph.D.